Iron Fist Series of Active Protection Systems

High-performance Active Protection Systems against full spectrum of anti-tank threats

Elbit Systems™ Land

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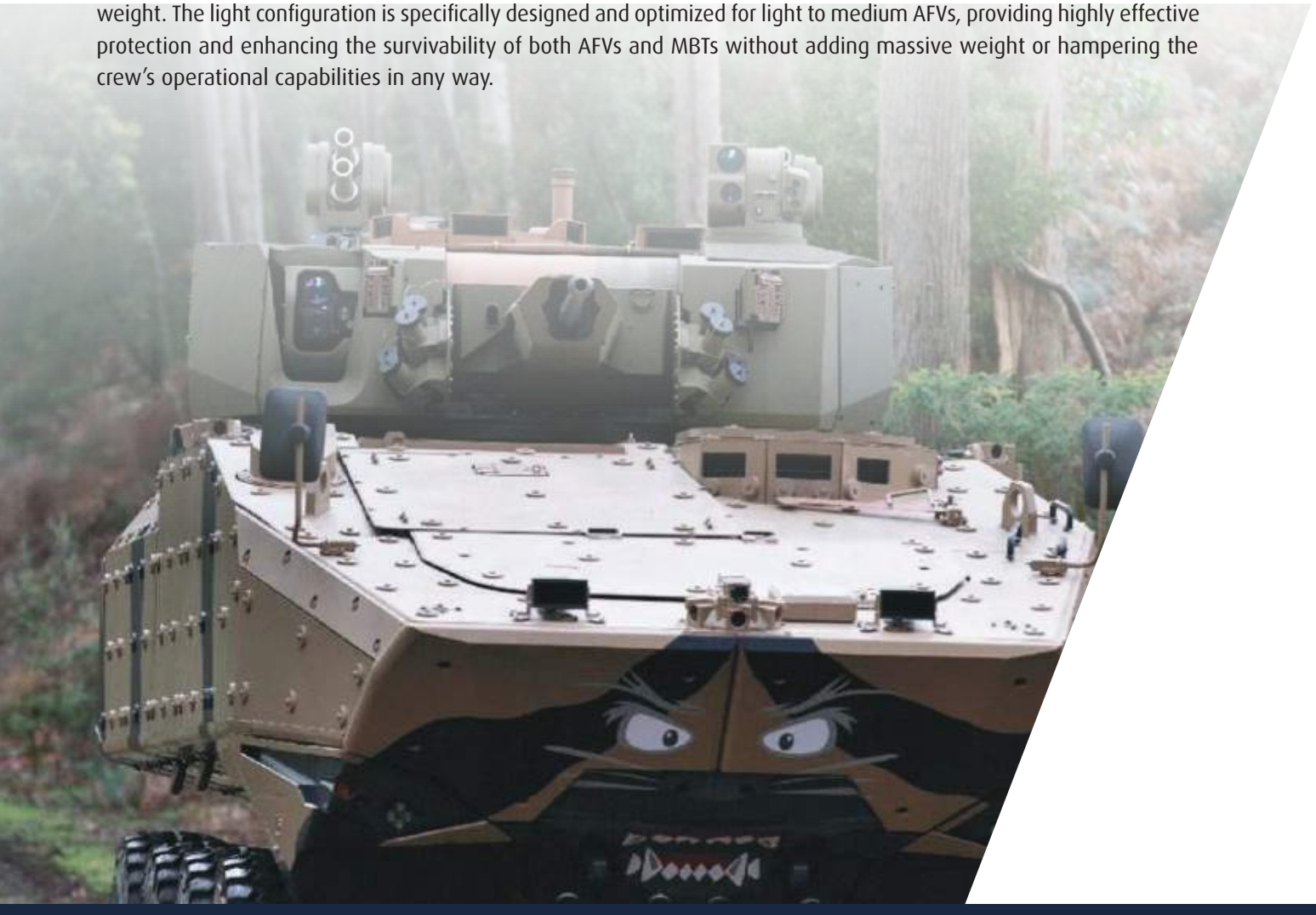
High-performance Active Protection Systems against full spectrum of anti-tank threats

Iron Fist series of Active Protection Systems (APS) delivers high-performance protection against anti-tank threats while increasing the survivability of the platform or vehicle. The series includes a light configuration for armored fighting vehicles (AFV), infantry fighting vehicles (IFV) and logistic vehicles, and a heavier configuration for main battle tanks (MBT). The solutions provide interception of anti-tank threats by precise-detection technologies and capabilities to detect, identify, classify the threat, and respond to hostile fire threats in various engagement scenarios, all without endangering the operators or harming the defending platforms. The Iron Fist APS utilizes a blast interceptor to defeat the threat without initiating its warhead.

A game changer in armored vehicle protection:

Iron Fist breaks the survivability paradigm of a direct relationship between threat levels to vehicle and ballistic armor weight. The light configuration is specifically designed and optimized for light to medium AFVs, providing highly effective protection and enhancing the survivability of both AFVs and MBTs without adding massive weight or hampering the crew's operational capabilities in any way.



Precision detection and tracking capabilities

Iron Fist's sensor suite provides unique detection, classification and hostile fire source location against all types of anti-armor threats. The system's sensor suite uses two sensing technologies, radar and optics for quick, robust and accurate detection, and provides reliable data with a negligible number of false alarms. It automatically detects and identifies a broad range of hostile anti-tank threats including short range RPGs, recoilless rifled ammunition, and anti-tank guided missiles (ATGMs), while the heavier configuration also handles tank rounds such as HEAT and KE. The sensor suite can handle simultaneous, multi-threat scenarios and provides the crew with accurate counter attack capabilities against the launching source.

Threat neutralization

The computerized control unit receives sensor data and calculates the optimal interception point and time for successful threat neutralization. The APS utilizes a blast interceptor for an effective and safe interception process. The small blast warhead is initiated at a safe distance from the defending platform, and counters the threat by producing a shock-wave effect at a precisely calculated location and time. This results in the destruction of the threat without initiation of its warhead and the creation of a jet formation with minimal residual effects.

Best-in-class SWaP

The Iron Fist APS are specifically designed to accommodate the constraints of lighter platforms and can be integrated on a wide variety of combat vehicles. The light and compact units offer ease of integration, maintenance, and calibration. It can be installed as an add-on to a pre-prepared platform without adding to the vehicle's major weight burden, and has a minimal impact on the vehicle's external silhouette.

On-board systems integration

The Iron Fist series fully integrates with existing systems such as battle management systems (BMS), fire control systems (FCS), and Elbit Systems' 'see through armor' Iron Vision technology. The APS solution does not impede or limit the range of operations of these critical systems, and effectively augments their functionality. The sensor suite enhances the platform's situational awareness capabilities, while providing 360° day/night surveillance sight and hostile fire detection (HFD) from its sensors up to gunshot fire and small arms bursts detection.

A game changer in

ARMORED VEHICLE PROTECTION

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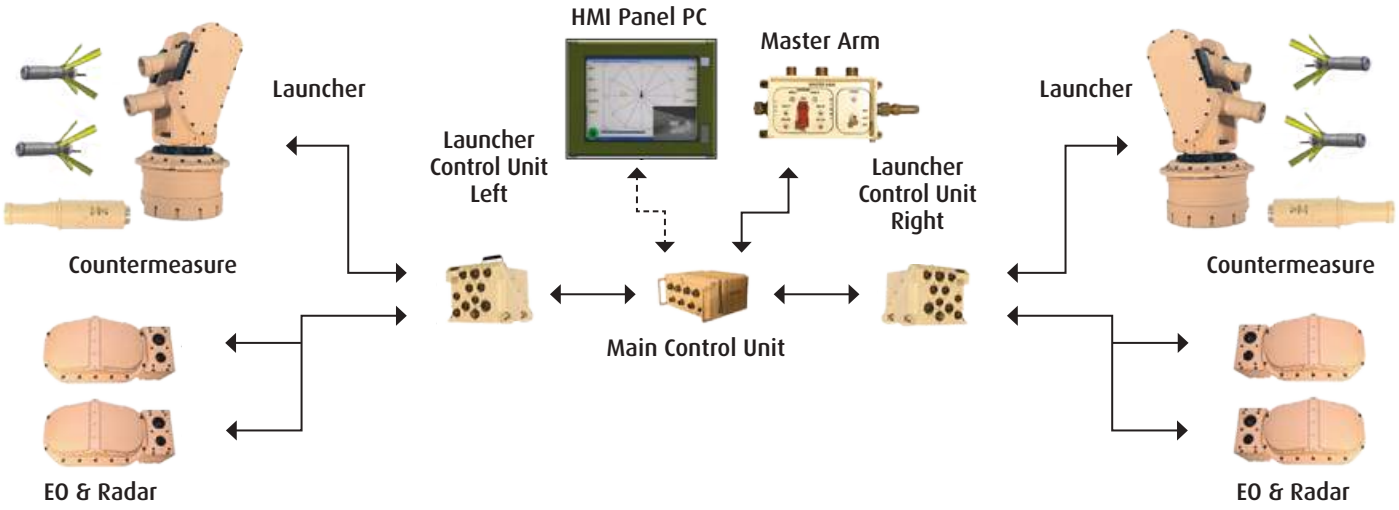
Key Features

- Modular, compact design compatible with various platforms
- Two independent sensing techniques: RF and passive IR
- Minimal integration constraints
- Miss-to-kill concept - minimal collateral damage
- Energy-efficient
- Optional soft-kill jammer against ATGM

Key Benefits

- Increases survivability of AFVs against anti-tank threats
- Effective against all types of anti-armor threats
- 360° coverage for sight surveillance and situational awareness
- Enables open hatch operations
- Lightweight, small form with minimal burden on vehicle
- Easy integration - quick mounting and dismounting



Elbit Systems Land
E-mail: land@elbitsystems.com www.elbitsystems.com
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